

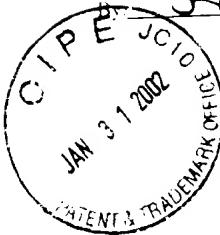
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Patent
PATENT
Attorney Docket No.: 019957-013821US

TOWNSEND and TOWNSEND and CREW LLP

Sharon Lovino

Karen Lovino



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Shawn DeFrees *et al.*

Application No.: 09/757,289

Filed: January 8, 2001

For: LOW COST MANUFACTURE OF
OLIGOSACCHARIDES

Examiner: Not Yet Assigned

Art Unit: 1652

INFORMATION DISCLOSURE
STATEMENT UNDER 37 CFR §1.97 and
§1.98

BOX IDS
Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The references cited on attached forms PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. In accordance with 37 CFR §1.98(d), copies of the references can be found in Application No. 09/442,111, filed November 17, 1999 (Attorney Docket No. 019957-013820US). Also enclosed is a copy of the Search/Examination report corresponding to the PCT application. It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicants believe that no fee is required for submission of this statement, since it is being submitted prior to the first Office Action. However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,


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Reg. No. 34,774

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Application Number	09/757,289
Filing Date	January 8, 2001
First Named Inventor	Shawn DeFrees et al.
Group Art Unit	1652
Examiner Name	Unassigned
Attorney Docket Number	019957-013821US

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U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
		Office ³	Number ⁴			
	AA		5,705,367	Gotschlich	Jan. 6, 1998	
	AB		5,798,233	Gotschlich	Aug. 25, 1998	
	AC		5,541,083	Paulson et al.	Jul. 30, 1996	
	AD		5,922,577	DeFrees et al.	Jul. 13, 1999	
	AE		5,945,314	Prieto et al.	Aug. 31, 1999	
	AF		5,047,335	Paulson et al.	Sept. 10, 1991	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
	AG	PCT	WO 98 44145		Prieto	Oct. 8, 1998		No
	AH	EPO	EP 0870841 A1		Koizumi	Oct. 14, 1998		No
	AI	EPO	EP 0861902 A1		Koizumi	Sep. 2, 1998		No

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Examiner Name	Unassigned

Attorney Docket Number 019957-013821US

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OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	AJ	Endo et al., "Large-scale production of N-acetyllactosamine through bacterial coupling." <i>Carbohydrate Res.</i> 316:179-183 (1999).
	AK	Koizumi et al., "Large-scale production of UDP-galactose and globotriose by coupling metabolically engineered bacteria." <i>Nature Biotech.</i> 16:847-850 (1998).
	AL	Vimir and Troy, "Regulation of Sialic Acid Metabolism in <i>Escherichia coli</i> : Role of N-Acylneuraminate Pyruvate-Lyase," <i>J. Bacteriol.</i> Vol. 164, No. 2, 854-860 (1985).
	AM	Mergaert et al., "The nodulation gene <i>nolK</i> of <i>Azorhizobium caulinodans</i> is involved in the formation of GDP-fucose from GDP-mannose," <i>FFBS Letters</i> 409:312-316 (1997).
	AN	Gonzales-Clemente et al., "High Production of polysialic Acid [Neu5Aca(2-8)-Neu5Aca(2-9)] _n by <i>Escherichia coli</i> K92 Grown in a Chemically Defined Medium," <i>Biol. Chem. Hoppe-Seyler</i> , Vol. 371, pp. 1101-1106 (1990).
	AO	Cho and Troy II, "Polysialic acid engineering: Synthesis of polysialylated neoglycosphingolipids by using the polysialyltransferase from neuroinvasive <i>Escherichia coli</i> K1," <i>Proc. Natl. Acad. Sci. USA</i> 91:11427-11431 (1994).
	AP	Williams and Wimpenny, "Extracellular Polysaccharide Biosynthesis by <i>Pseudomonas</i> NCIB 11264. Studies on Precursor-forming Enzymes and Factors Affecting Exopolysaccharide Production by Washed Suspensions," <i>J. of Gen. Microbiol.</i> 116:133-141 (1980).
	AQ	Mengin-Lecreulx et al., "Pool Levels of UDP N-Acetylglucosamine and UDP N-Acetylglucosamine-Enolpyruvate in <i>Escherichia coli</i> and Correlation with Peptidoglycan Synthesis," <i>J. of Bacteriology</i> , Vol. 154, No. 3, 1284-1290 (1983).
	AR	Lloret et al., "Genetic analysis of the transcriptional arrangement of <i>Azotobacter vinelandii</i> alginate biosynthetic genes: identification of two independent promoters," <i>Mol. Microbiol.</i> 21(3):449-457 (1996).
	AS	Lindahl et al., "Regulated Diversity of Heparan Sulfate," <i>J. Biol. Chem.</i> 273(39):24979-24982 (1998).
	AT	Zacharek et al., "Bacteria Targeted by Human Natural Antibodies Using α -Gal Conjugated Receptor-Specific Glycopolymers," <i>Bioorg. Med. Chem.</i> 7:1549-1558 (1999).

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	AU	Wang <i>et al.</i> , "Enhanced Inhibition of Human anti-Gal Antibody Binding to Mammalian Cells by Synthetic α -Gal Epitope Polymers., <i>J. Amer. Chem. Soc.</i> , 121(36):8174-8181 (1999).	
	AV	Kawaguchi <i>et al.</i> , "An Improved Method for the Fermentative Production of GDP-mannose from 5'-GMP ¹ ," <i>J. Ferment. Tech.</i> 49(3):195-201 (1971)	
	AW	Kawaguchi <i>et al.</i> , "Studies on Microbial Metabolisms of Sugar Nucleotides, Part V., "Effects of Various Factors on the Fermentative Production of GDP-mannose, GDP and GTP from 5'-GMP by Air dried Cells of Baker's Yeast," <i>Agr. Biol. Chem</i> 34(6):908-918 (1970).	
	AX	Janczuk <i>et al.</i> , "Alpha-Gal oligosaccharides: chemistry and potential biomedical application," <i>Curr. Med. Chem.</i> 6(2):155-64 (1999)	
	AY	Gilbert <i>et al.</i> , "The synthesis of sialylated oligosaccharides using a CMP-Neu5Ac synthetase/sialyltransferase fusion," <i>Nat. Biotech.</i> 16:769-772 (1998).	

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